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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/715,027	11/17/2003	Geoff Haviland	322-00080	2782
26753	7590	02/22/2006	EXAMINER	
ANDRUS, SCEALES, STARKE & SAWALL, LLP			GORMAN, DARREN W	
100 EAST WISCONSIN AVENUE, SUITE 1100			ART UNIT	
MILWAUKEE, WI 53202			PAPER NUMBER	

3752

DATE MAILED: 02/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/715,027

Applicant(s)

HAVILAND ET AL.

Examiner

Darren W. Gorman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 November 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION***Drawings***

1. The drawings are objected to because Figures 1-3 show exploded views that are not bracketed. When an exploded view is shown in a figure which is on the same sheet as another figure, the exploded view should be placed in brackets. See MPEP 608.02 Section V(h)(1). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are further objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description:

- Reference number "21", as shown in Figure 1 is not mentioned in the specification.

Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sons, USPN 3,552,658, in view of Sons et al., USPN 4,167,247.

Sons ('658) shows a spray valve assembly (10) (see Figures 1 and 2) comprising: an upper valve body including a control chamber (84) for receiving a fluid through a piston port (94) and a piston (98) slidable within the chamber; a lower valve body including a fluid conduit for receiving fluid into the spray valve, a lower valve seating surface (42), an annular fluid chamber around the lower valve seating surface, and a fluid outlet; and a seating member

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between the upper valve body and the lower valve body including: a valve seat (106) for bearing against the lower valve seating surface and closing the fluid conduit when pressurized fluid is received through the piston port and displacing the piston within the chamber (see column 4, line 19, through column 5, line 3). Sons ('658) further shows the spray valve wherein the lower valve seating surface is provided on a conduit sleeve (40) fitted into the fluid conduit, the conduit sleeve provided with a peripheral flange (48). Sons ('658) also shows a base plate (28) having a recess (24) for receiving and locating an inner portion (50) of the peripheral flange of the conduit sleeve, the base plate being secured to the lower valve body and securing the conduit sleeve in position. Further, Sons ('658) shows a spray pattern adjustment means provided around the lower valve body (see column 4, lines 39-48), the adjustment means including a collar (38) having an outlet orifice and means (130, 132, 134, 136 and 128) to adjustably secure the collar in position around the lower valve body, wherein the outlet orifice of the collar is positioned in proximity to the fluid outlet of the lower valve body with the outlet orifice being shaped to restrict the flow of fluid from the fluid outlet (see Figure 2).

However, the control chamber (84) of Sons ('658) is expressly disclosed as receiving pneumatic pressure through the piston port (94) rather than pressurized hydraulic fluid. Also, the valve seat (106) and piston (98) of Sons ('658) is shown to be an integrally formed piece, rather than two separate pieces wherein the piston is seated in an "upper seat". Further, though the piston (98) of Sons ('658) includes a pair of O-rings (92) for providing a fluid-tight seal between the upper valve body and the piston such that the control fluid cannot leak out, Sons does not show a diaphragm extending between the upper valve body and the lower valve body. It should be noted, one having ordinary skill in the art would recognize that the O-ring (92) sealing

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arrangement shown by Sons ('658) is prone to breakdown and failure due to the inherent frictional contact caused by piston movement within the control chamber.

Sons et al. ('247) shows a spray valve (10) (see Figures 1 and 2) having a control pressure fluid port (42), which pressurizes a control chamber (44) in order to close a spray orifice of the spray valve. Sons et al. further expressly discloses the control pressure fluid port for the "admission of air or another suitable control fluid under pressure" (see column 3, lines 57-60). It should also be noted that the interchangeable use of hydraulic control fluid pressure and pneumatic control pressure for remotely actuating valves is well known in the art.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply hydraulic control fluid pressure, as taught by Sons et al. ('247) to the control chamber shown by Sons ('658), since it is well known in the art to actuate remotely actuated valves using either hydraulic control fluid pressure or pneumatic control pressure, and one having ordinary skill would recognize their interchangeability. Further, there is nothing shown in the device of Sons ('658) that would prevent the device from being actuated by hydraulic control fluid pressure.

Sons et al. ('247) also shows a resilient diaphragm (26) located between an upper valve body (12) and a lower valve body (14), the diaphragm being integrally connected to a moving valve member (16) such that control fluid in the control chamber (44) is prevented from leaking from the control chamber.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include a resilient diaphragm, such as that taught by Sons ('247), located between the upper valve body and lower valve body shown by Sons ('658) and integrally

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connected to the piston of Sons ('658), in order to more reliably prevent leakage of control fluid from the control chamber, since the resilient diaphragm shown by Sons et al. ('247) when adapted to the spray valve of Sons ('658) would not be subject to frictional contact and would create a more reliable spray valve that is less prone to leakage.

As to the "upper seat for the piston" recitation, it would have been obvious to one having ordinary skill in the art at the time the invention was made to form the integrally formed piston and valve seat portion of Sons ('658) from two separate pieces wherein the piston would be seated in an "upper seat" of the valve seat portion, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177 (Bd PatApp&Int 1969).

Though not being relied upon for this office action, it should be noted that the device shown by Sons et al. (USPN 4,167,247) also includes a spray pattern adjustment means (90) including a collar having an adjustment bolt (116) and an outlet orifice which is shaped to restrict the flow of fluid from the fluid outlet (see Figures 3 and 4)

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patents to Wardrup, Weirich et al., and Beccaria et al., are cited as of interest.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Darren W. Gorman whose telephone number is 571-272-4901. The examiner can normally be reached on M-F 7:30-5:00.


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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on 571-272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Darren W Gorman
Examiner
Art Unit 3752

DWG 2/8/06
DWG
February 8, 2006


David A. Scherbel
Supervisory Patent Examiner
Group 3700